

than waste land it should be eradicated at the first opportunity.

Specimens of all species discussed herein are deposited in the Tracy Herbarium at the Agricultural and Mechanical College of Texas, and at Gray Herbarium, Harvard University.

Texas Agricultural Experiment Station,
Agricultural and Mechanical College of Texas,
College Station, August 30, 1939.

REVIEW

Liverworts of southern Michigan. By WILLIAM C. STEERE. Cranbrook Institute of Science, Bulletin no. 17. Pp. 1-97, pls. I-XXII and frontispiece. Bloomfield Hills, Michigan. 1940. Waterproof cloth, \$1.00; paper, \$0.50.

Dr. Steere has written this book for beginners. There are eight or nine pages devoted to the structure and reproduction of liverworts, where they grow, how to gather and preserve them, how to identify them. The language is simple so that anyone with little knowledge of botany may understand. A glossary of three dozen necessary scientific terms used in describing the plants aids in simplification. There is a key to the genera and species which occur in southern Michigan; also short descriptions of genera and species. Most useful of all, perhaps, are twenty-three pages of photographs and drawings.

The book will be of great help to anyone beginning the identification of liverworts, whether of Michigan or not, especially on account of the excellent illustrations.—T. C. FRYE, Department of Botany, University of Washington, Seattle.

NOTES AND NEWS

NUTLETS OF *AM SINCKIA INTERMEDIA* TOXIC TO SWINE, HORSES AND CATTLE. (Scientific paper No. 428, Agricultural Experiment Station, State College of Washington). The toxicity of the nutlets of *Amsinckia intermedia* Fisch. & Mey. is attested by the fact that nine pigs, three horses and one of three calves, fed wheat screenings containing them, developed hepatic cirrhosis. The parenchymal cells of the liver were destroyed and replaced by connective tissue. In swine and cattle the condition is locally known as "hard liver" disease. In horses, it is known as "walking disease" because of the tendency of horses with hepatic cirrhosis to wander aimlessly. Only in certain semi-arid regions of Washington, Oregon and Idaho, where *Amsinckia intermedia* grows abundantly in the grain fields, has the condition been recognized clinically. In certain limited regions the raising of swine and horses has been almost abandoned. It is probable that sublethal poisoning may be much more widespread, occurring in those areas where the species is only moderately abundant. Because of its irritant nature, animals do not graze the plant but readily eat the seed which is harvested with the grain and which has a